

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1. (currently amended) A network device configured to control communication of data frames between stations, comprising:

a plurality of receive devices corresponding to ports on the network device, the receive devices configured to receive data frames from the stations; and

an external memory interface configured to:

receive data from the plurality of receive devices,

transfer a portion of the data received from a first ~~one of~~ group of the receive devices to a first memory~~[[,]]~~ and a second memory in an alternating manner, and

transfer a portion of the data received from a second ~~one of~~ group of the receive devices to ~~[[a]]~~ the first memory and the second memory in an alternating manner, ~~the external memory interface including a first external memory bus to transfer data to the first memory and a second external memory bus to transfer data to the second memory, the external memory interface being further configured to~~

generate odd address information when transferring data via ~~[[the]]~~ a first external memory bus to the first memory, and

generate even address information when transferring data via ~~[[the]]~~ a second external memory bus to the second memory.

2. (currently amended) The network device of claim 1, wherein the external memory interface includes:

a scheduler coupled to the receive devices and configured to enable the received data frames to be output to the first and second memories, the scheduler simultaneously outputting first and second selection signals for outputting data from one of the first group of receive device devices and one of the second group of receive device devices, respectively.

3. (currently amended) The network device of claim 2, wherein the external memory interface is further configured to simultaneously transfer 8 bytes of data from one of the first group of receive device devices to the first memory and 8 bytes of data from one of the second group of receive device devices to the second memory.

4. (currently amended) The network device of claim 1, wherein the external memory interface is further configured to simultaneously transfer the portions of the data from the first and second groups of receive devices to the first and second memories.

5. (currently amended) The network device of claim 1, wherein the external memory interface is configured to simultaneously transfer data received from a first one of [[a]] the first group of the receive devices via the first external memory bus and a second one of [[a]] the second group of the receive devices via the second external memory bus.

6. (canceled)

7. (previously presented) The network device of claim 5, wherein the first and second external memory buses are each 8-bytes wide and operate at a frequency of 100 MHz.

8. (canceled)

9. (previously presented) The network device of claim 1, wherein the external memory interface is further configured to simultaneously retrieve data from the first and second memories.

10. (currently amended) In a network device that controls communication of data frames between stations, a method of storing data frame information, comprising:
receiving a plurality of data frames;
temporarily storing the received data frames in a plurality of receive devices; and
simultaneously transferring data frame information to at least a first memory and a second memory, wherein the simultaneously transferring includes:

~~alternately~~ alternating the transferring of data frame information from a first group of the receive devices to the first and second memories, and

~~alternately~~ alternating the transferring of data frame information from a second group of the receive devices to the first and second memories, wherein when data frame information from the second group of receive devices is being transferred to one of the first and second memories, data frame information from the first group of receive devices is being transferred to the other of the first and second memories.

11. (previously presented) The method of claim 10, further comprising:
simultaneously transmitting selection signals to first and second receive devices for
selectively outputting data stored in the first and second receive devices.

12. (previously presented) The method of claim 10, wherein the simultaneously
transferring further includes:

transferring 8 bytes of data from a first receive device to the first
memory and 8 bytes of data from a second receive device to the second memory.

13. (previously presented) The method of claim 10, wherein the simultaneously
transferring further includes:

sending a portion of a first data frame via a first external memory bus and sending a
portion of a second data frame via a second external memory bus.

14. (canceled)

15. (original) The method of claim 10, further comprising:
simultaneously retrieving data frame information from the first and second
memories.

16. (currently amended) A data communication system for controlling the communication of data frames between stations, comprising:

- a plurality of receive devices configured to receive data frames from the stations;
- a scheduler coupled to the plurality of receive devices and configured to generate selection signals to selectively output data frame information from the receive devices;
- a switching device configured to:
 - receive the data frame information, and to
 - simultaneously transfer data frame information from one of a first one of the data frames group of receive devices via a first external memory bus and data frame information from one of a second one of the data frames group of receive devices via a second external memory bus;
 - a first memory configured to receive data frame information from the first external memory bus; and
 - a second memory configured to receive data frame information from the second external memory bus, wherein the switching device is further configured to:
 - generate data address information having odd addresses for data transferred to the first memory, and
 - generate data address information having even addresses for data transferred to the second memory,
 - transfer data frame information from the first group of receive devices to the first and second external memory buses in an alternating manner, and
 - transfer data frame information from the second group of receive devices to the first and second external memory buses in an alternating manner.

17. (currently amended) The system of claim 16, further comprising:

first and second multiplexers coupled to the first and second groups of the receive devices, respectively, each of the first and second multiplexers being configured to receive the selection signals from the scheduler and to output a portion of a data frame.

18. (currently amended) The system of claim 17, wherein the switching device is further configured to ~~alternately~~ transfer data received from the first multiplexer to the first and second external memory buses in an alternating manner and to ~~alternately~~ transfer data received from the second multiplexer to the first and second external memory buses in an alternating manner.

19. (previously presented) The system of claim 16, wherein the first memory is configured to store data words having odd addresses and the second memory is configured to store data words having even addresses.

20. (canceled)

21. (new) The network device of claim 1, wherein the external memory interface is further configured to:

transfer data from one of the first group of receive devices to the first memory during a first clock cycle,

transfer data from one of the second group of receive devices to the second memory during the first clock,

transfer data from one of the first group of receive devices to the second memory during a second clock cycle, the second clock cycle immediately succeeding the first clock cycle, and

transfer data from one of the second group of receive devices to the first memory during the second clock cycle.

22. (new) The method of claim 10, wherein the alternating of the transferring of data frame information from the first group of receive devices to the first and second memories is performed each clock cycle.

23. (new) The system of claim 16, wherein the switching device is further configured to:

alternate the transfer of data frame information from the first group of receive devices to the first and second external memory buses each clock cycle, and

alternate the transfer of data frame information from the second group of receive devices to the first and second external memory buses each clock cycle.